Software Upgrade Instructions

Alaris® PC Unit, Model 8015
Upgrade to v9.12

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Explanation

IMPORTANT: If the Alaris® PC unit software version is prior to v9.1.14, call the CareFusion support center at 1.888.562.6018 to arrange for a software upgrade. Do not use these instructions and the accompanying software to upgrade software that is prior to v9.1.14.

This document provides instructions to:

- Upgrade Model 8015 software from v9.1.14 to v9.12.
- Upgrade Model 8015 software from v9.5 to v9.12.
- Upgrade Model 8015 software from v9.7 to v9.12
- Upgrade Model 8015 software from v9.9 to v9.12.

References

The instructions in this document are to be used in conjunction with the *v9.7.x* or *v9.8 Alaris System Maintenance Software User Guide*.

Kit Contents

Before proceeding, verify that the following items are enclosed in the applicable kit:

- 8990 v9.12 Guardrails® Point-of-Care software CD
- Serial Cable (Alaris PC unit to computer connection)

Parts and Tools Required

In addition to the parts included in the applicable upgrade kits, the following parts and tools are required.

Software Upgrade:

- Windows-based personal computer or laptop, with v9.7.x or v9.8 Alaris System Maintenance software installed
- Three CompactFlash® (CF) memory cards in FAT/FAT16 format, 64 MB to 2 GB . CareFusion recommends SiliconDrive® CF, SSD-C64MI-3012 (or equivalent) — available from Silicon Systems, Inc. It is also available from CareFusion as P/N 10012641.
- CF card reader
- #1 Phillips® head screwdriver

Available from CareFusion:

- 8975 Alaris System Maintenance software kit, v9.7.X or v9.8
- 9981 Guardrails® CQI Reporter software kit, v9.2.1or v9.8 (optional use for downloading Guardrails alert logs)
- Serial to USB Port Adapter kit (P/N 12273817, or equivalent) (if computer being used does not have a DB-9 serial port)

Warning and Caution Definitions

A **WARNING** is an alert to a potential hazard which could result in serious personal injury and/or product damage if proper procedures are not followed.

A **CAUTION** is an alert to a potential hazard which could result in minor personal injury and/or product damage if proper procedures are not followed.

Identify Software Version

1. Power on Alaris PC unit.
2. Respond to all prompts:

- Press **Yes** on the NEW PATIENT? screen.
- Press **Yes** on the profile screen (if displayed).
- On the Patient ID screen (if displayed) press **Exit**.

3. Press **OPTIONS**.
4. Press **PAGE DOWN**.
5. Press **Software Versions**.
6. Press **View**. The software and firmware versions are displayed.
7. Compare (and write down) software/firmware Main Processor versions displayed on Alaris PC unit with corresponding versions listed on the label of the v9.12 Guardrails Point-of-Care software CD.
8. Power down the Alaris PC unit.

RF Card and RF Card Cover Compatibility

It is important to use the correct RF card cover. If the existing RF card is being reinstalled after the software upgrade, make sure to reinstall the existing RF card cover.

The following table provides the RF card and RF card cover identifier and compatibility information.

RF Card	RF Card Identifier	RF Card Cover	Compatibility
Symbol IEEE 802.11b (does not support WPA-2 security)	Blue label	A foam insert might or might not be used.	— A cover with a foam insert: Before screwing the cover down, place it over the RF card. If there is a gap between the cover and the rear panel, use a cover that has no foam insert. — A cover with no foam insert: If there is a noticeable gap between the inside surface of the cover and the end of the RF card, use a cover that has a foam insert. Using the wrong cover can result in a loose fit between the RF card and its cover, creating the potential for network communication errors if the RF card becomes loose.
AmbiCom® IEEE 802.11b/g	Gray card	A foam insert is not used.	Installing a cover with a foam insert results in unacceptable pressure being applied against the RF card.
Motorola® IEEE 802.11a/b/g	Green label	A pre-installed (attached) foam insert is used.	Using a cover with no foam insert can result in a loose fit between the RF card and its cover, creating the potential for network communication errors if the RF card becomes loose.

Software Upgrade

NOTE: You cannot use Alaris System Maintenance software to upgrade an Alaris PC unit Model 8015 to v9.12. Flashing the firmware files must be done with a CF card.

WARNING: Never upgrade the software while the Alaris PC unit is connected to the patient.

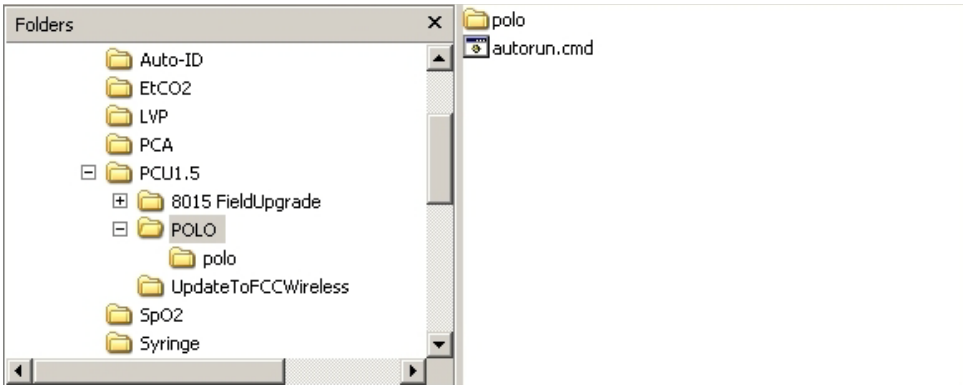
CAUTION:

- Upgrading the software erases CQI information on the Alaris PC unit. Before starting the upgrade process, it is highly recommended to download the Guardrails alert logs using the download tool that is part of the Alaris System Maintenance software or Guardrails CQI Reporter software. The software used to download the Guardrails alert logs must be compatible with the Alaris PC unit version.
- Do not use these upgrade instructions on the Model 8000. Doing so can render the Model 8000 inoperable.
- Reinstalling v9.12 on a FIPS 140-2 compliant Alaris PC unit with v9.12 already installed disables the FIPS 140-2 mode and zeroizes the Critical Security Parameters (CSP). For more detailed information about FIPS 140-2 compliance, refer to the FIPS 140-2 compliance instructions, the *Alaris System Maintenance Software User Guide*, and *Alaris Systems Manager Software User Guide*.

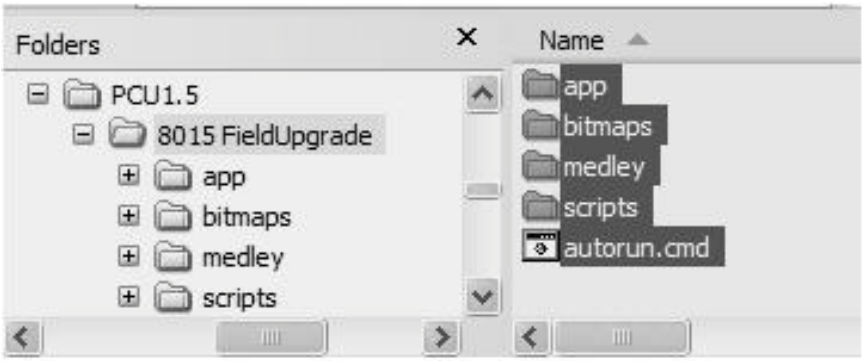
Task 1: Flash Alaris PC Unit Using CF Card (takes approximately 5 minutes)

1. Label the first FAT16-formatted CF card as "8015 POLO."
2. Copy folder contents of v9.12 Guardrails Point-of-Care software CD to computer.
3. Connect CF card reader to computer.

4. Insert CF card labeled "8015 POLO" into CF card reader and delete any existing contents on card.
5. Using Windows Explorer®, locate **POLO** folder (path: \PCU1.5\POLO).

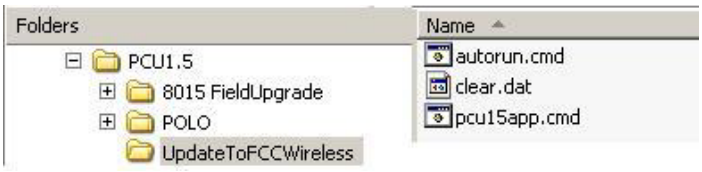


6. Copy contents of **POLO** folder (not folder itself) to CF card labeled "8015 POLO." When complete, CF card should contain one folder and an autorun.cmd file.
7. Remove CF card labeled "8015 POLO" from CF card reader.
8. Label the second FAT16-formatted CF card as "8015 App."
9. Insert CF card labeled "8015 App" into CF card reader and delete any existing contents on card.
10. Using Windows Explorer®, locate **8015 FieldUpgrade** folder (path: \PCU1.5\FieldUpgrade).

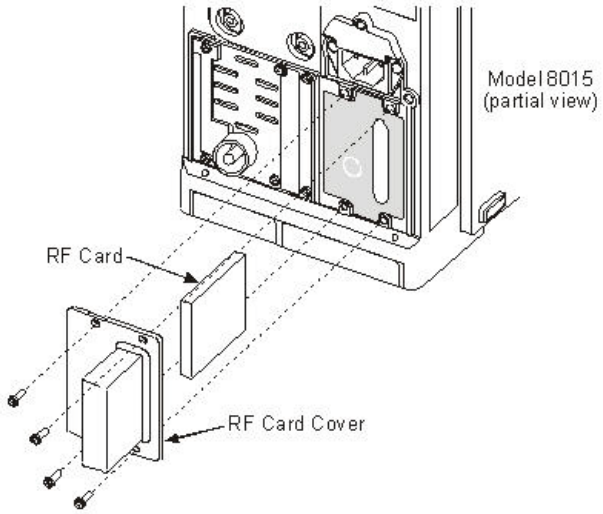


11. Copy contents of **8015 FieldUpgrade** folder (not folder itself) to CF card labeled "8015 App." When complete, CF card should contain four folders and an autorun.cmd file.
12. Remove CF card labeled "8015 App" from CF card reader.
13. Label the third FAT16-formatted CF card as “FCCwirelessconfig.”
14. Insert CF card labeled “FCCwirelessconfig” into CF card reader and delete any existing contents on card.
15. Using Windows Explorer®, locate **UpdateToFCCWireless** folder (path: \PCU1.5\UpdateToFCCWireless).

16. Copy contents of **UpdateToFCCWireless** (not folder itself) to CF card labeled "FCCwirelessconfig." When complete, CF card should contain three files.



17. Remove CF card labeled "FCCwirelessconfig" from CF card reader.
18. Ensure that Alaris PC unit is powered off and not plugged into AC power.
19. Remove RF card cover. Retain RF card cover and screws for reinstallation later on in this procedure.



20. Insert CF card labeled "8015 POLO" into RF card slot.

    The CF card can be inserted in only one direction — with label facing away from the center of the Alaris PC unit. To avoid damaging the pins, do not force the CF card into the connector.

21. Plug Alaris PC unit into AC power.
22. Power on Alaris PC unit. Alaris PC unit displays installation status on main screen and powers off when complete.
23. Remove CF card labeled "8015 POLO" from Alaris PC unit.
24. Insert CF card labeled "8015 App" into RF card slot.

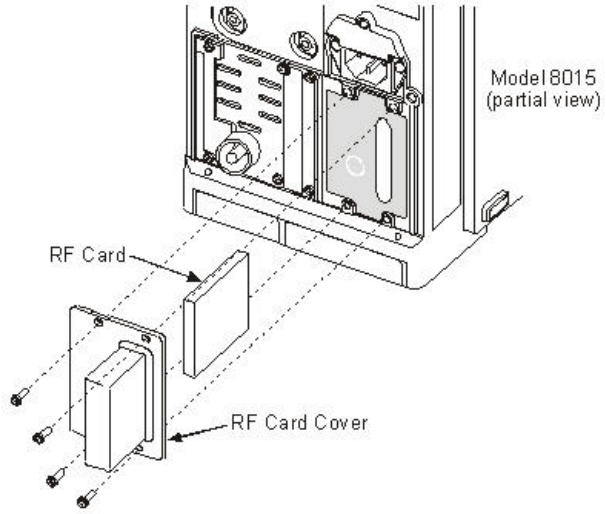
    The CF card can be inserted in only one direction — with label facing away from the center of the Alaris PC unit. To avoid damaging the pins, do not force the CF card into the connector.

25. Power on Alaris PC unit. Alaris PC unit displays installation status on main screen and powers off when complete.
26. Remove CF card labeled "8015 App" from Alaris PC unit.
27. Power cycle the Alaris PC Unit with no CF card installed.
28. Insert CF card labeled "FCCwirelessconfig" into RF card slot.

The CF card can be inserted in only one direction — with label facing away from the center of the Alaris PC unit. To avoid damaging the pins, do not force the CF card into the connector.

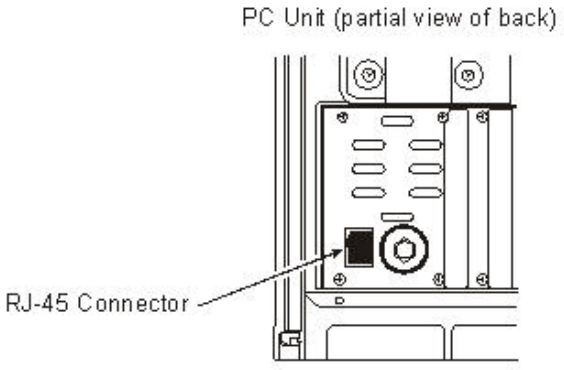
29. Power on Alaris PC unit. When the wireless configuration flash completes, the Alaris PC Unit NEW PATIENT? screen displays.
30. Verify that Alaris PC unit is successfully upgraded (see *Identify Software Version* on page 2).
31. Power off Alaris PC unit and unplug from AC power.
32. Remove CF card labeled "FCCwirelessconfig" from Alaris PC unit.
33. Insert RF card into RF card slot, with card's LEDs facing away from center of Alaris PC unit.
34. Install RF card cover.

IMPORTANT: Using the wrong RF card cover can result in a loose fit between the RF card and its cover, creating the potential for network communication errors if the RF card becomes loose.



Task 2a: Wireless Network Configuration — Transfer Network Configuration/Data Set to Alaris PC Unit

1. Plug Alaris PC unit into AC power.
2. Remove rubber plug from RJ-45 connector on Alaris PC unit.
3. Connect serial communications cable to RJ-45 connector on Alaris PC unit.



4. Connect communications cable to communications port on computer. If computer has only a USB port, connect serial cable to USB adapter cable (using kit available from CareFusion) and USB adapter cable to computer's USB port.
5. Ensure that System Maintenance software recognizes computer's connection to Alaris PC unit (refer to *v9.7.xor v9.8 Alaris System Maintenance Software User Guide*, *Hardware Connections)*.
6. Run Transfer Network Configuration (Silent) task (refer to *v9.7.X or v9.8 Alaris System Maintenance Software User Guide — Configure Components*, for details).
7. Power off Alaris PC unit.
8. Disconnect serial cable from Alaris PC unit and insert rubber plug in RJ-45 connector.
9. Power on Alaris PC unit.
10. Respond to all prompts and press **Yes** on the NEW PATIENT? screen.
11. Verify that Alaris PC unit connects to server (green light in lower-left corner of Alaris PC unit keypad flashes as a data set is transferred).

    NOTE: To be able to monitor the transferring data set, the Alaris PC unit must be within the range of the network access point.
12. To display the Data Set Status menu:
    - Press **Option**.
    - Press **PAGE DOWN** twice.
    - Press **Data Set Status**.

13. When the new data set is visible and transfer is complete, power off the Alaris PC unit.

NOTE:

- The data set is visible in the Pending field of the Data Set Status menu.
- When the status changes from Transferring ... to Not Activated, the transfer is complete.

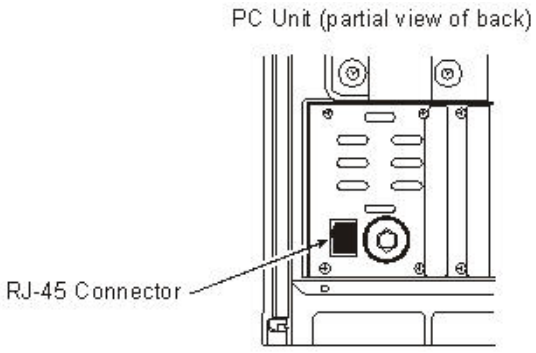
14. Power on Alaris PC unit.
15. Respond to all prompts and press **Yes** on the NEW PATIENT? screen.
16. Select a profile in new data set to verify that data set has successfully transferred.
17. The Alaris PC unit is now successfully upgraded.

NOTE:

In order to use the Barcode/Pre-population functionality, the data set must be transferred wirelessly from the server.

Task 2b: Non-Wireless Configuration — Transfer Data Set to Alaris PC Unit

1. Plug Alaris PC unit into AC power.
2. Remove rubber plug from RJ-45 connector on Alaris PC unit.
3. Connect serial communications cable to RJ-45 connector on Alaris PC unit.



4. Connect communications cable to communications port on computer. If computer has only a USB port, connect serial cable to USB adapter cable (using kit available from CareFusion) and USB adapter cable to computer's USB port.
5. Ensure that the Alaris System Maintenance software recognizes computer's connection to Alaris PC unit (refer to *v9.7.xor v9.8 Alaris System Maintenance Software User Guide*, *Hardware Connections*).
6. Run Transfer Data Set task (refer to *v9.7.x or v9.8 Alaris System Maintenance Software User Guide* for details).

   NOTE: To avoid encountering network communication errors in a non-wireless environment, run disable task feature on Alaris PC unit (refer to *v9.7.x or v9.8 Alaris System Maintenance Software User Guide*, *Configure Components* chapter).
7. When task has completed, power off Alaris PC unit.
8. Disconnect serial cable from Alaris PC unit and insert rubber plug in RJ-45 connector.
9. Power on Alaris PC unit.
10. Respond to all prompts and press **Yes** on the NEW PATIENT? screen.
11. Select a profile in new data set to verify that data set has successfully transferred.
12. The Alaris PC unit is now successfully upgraded.

Troubleshooting

Contact CareFusion Technical Support if:

- A failure occurs that is not identified in the following tables.

- The failure cannot be corrected after performing the instructions in the following tables.

Failure	Response
An error occurred during execution of Transfer Network Configuration (Silent) task.	Verify that Alaris PC unit (main processor) — and wireless main, if applicable — were successfully upgraded (see *Identify Software Version* on page 2). • If upgrade failed, repeat software upgrade. • If upgrade was successful, refer to *v9.7.x* or *v9.8 Alaris System Maintenance Software User Guide* for *Transfer Network Configuration — Error Handling* information.
Error 600.6835—Invalid Network Configuration. (wireless environment)	1. Connect Alaris PC unit to Alaris System Maintenance software and repeat Transfer Network Configuration (Silent) task. 2. If Transfer Network Configuration (Silent) task fails, refer to *v9.7.x* or *v9.8 Alaris System Maintenance Software User Guide* for *Transfer Network Configuration — Error Handling* information. 3. If error persists, return Alaris PC unit to CareFusion for repair.
Error 600.6835—Invalid Network Configuration. (non-wireless environment)	Disable wireless feature on Alaris PC unit (refer to *v9.7.x* or *v9.8 Alaris System Maintenance Software User Guide*, *Configure Components* chapter for instructions).

Failure	Response
Error 100.6130—System Configuration Data Integrity.	Reset wireless feature on Alaris PC unit System Configuration settings: 1. While holding down **OPTIONS**, press **SYSTEM ON**. 2. When Alaris PC unit beeps, release **OPTIONS**. 3. At System Configuration screen, press **Factory Default**. 4. Press **Yes**. 5. Press **Exit**. 6. Power on Alaris PC unit again.
Data set does not transfer wirelessly. OR No wireless connection is detected.	To verify network connectivity: 1. Press **OPTIONS**. 2. Press **PAGE DOWN** twice. 3. Press **Network Status**. 4. Enter Network Status Access Key (32221) and press **CONFIRM**. If Status reads: • **ASSOCIATED** — Ensure that the Alaris PC unit is in an area with good wireless coverage. Link Quality and Signal Strength both need to be above 20%. • **SCANNING** or **ASSOCIATING** — Contact applicable hospital/facility support group to verify that Alaris PC unit is in an area that has wireless coverage and that the correct SSID is being used. Because the system supports up to eight profiles, it might take as long as 16 minutes to obtain a network connection. • **AUTHENTICATING** — Contact applicable hospital/facility support group. • **INVALID CONFIG** — RF card being used does not support wireless features contained in transferred network configuration. Refer to *v9.7.x or v9.8 Alaris System Maintenance Software User Guide* for *Transfer Network Configuration — Error Handling* information. • **DISABLED** — Ensure that RF card is properly fitted inside Alaris PC unit and that correct RF card cover is being used. To verify server connectivity: 1. From Network Status screen, press **SERVER STATUS**. If Status reads: • **CONNECTED** — Leave Alaris PC unit power on for at least 24 hours and then recheck data set status (see *Task 2a: Wireless Network Configuration — Transfer Network Configuration/Data Set to Alaris PC Unit* on page 6). • **CONNECTING** — Contact applicable hospital/facility support group to verify network is functional. If network is not functional, contact applicable hospital/facility group to verify that Network Configuration settings are correct.

NOTES:

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